

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-21 (Canceled)

Claim 22 (Previously presented): A method of making an electronics module, where said electronics module is to operate at one of a predetermined plurality of operating speeds, said method comprising:

providing a plurality of integrated circuits;

assembling an electronics module by demountably attaching selected ones of said integrated circuits to a module substrate;

testing said demountably assembled module at a selected one of said operating speeds;

if said module fails said testing:

removing at least one of said integrated circuits determined to have caused said failure from said module substrate,

replacing said at least one removed integrated circuit with another of said plurality of integrated circuits , and

repeating said testing step and, if said module again fails said testing, said removing, replacing, and repeating steps.

Claim 23 (Previously presented): The method of claim 47, wherein said step of grouping a plurality of integrated circuits in accordance with said operating speeds comprises:

determining an actual operating speed of each said integrated circuit; and

grouping said integrated circuits in accordance with said actual operating speeds.

Claim 24 (Previously presented): The method of claim 47, wherein said step of grouping a plurality of integrated circuits in accordance with said operating speeds comprises:

- determining an actual operating speed of each said integrated circuit;
- subtracting a guard band from said actual operating speed to obtain a guard-banded operating speed; and
- grouping said integrated circuits in accordance with said guard-banded operating speeds.

Claim 25 (Original): The method of claim 22, wherein:

- each integrated circuit includes a plurality of input/output terminals and a plurality of conductive elongate interconnection elements attached to said input/output terminals, and
- said module substrate includes a plurality of contact locations for contacting said elongate interconnection elements.

Claim 26 (Original): The method of claim 25, wherein said step of assembling said module comprises:

- bringing elongate interconnection elements attached to said selected integrated circuits into contact with corresponding ones of said contact locations, and
- demountably securing said selected integrated circuits to said module substrate.

Claim 27 (Original): The method of claim 26, wherein said step of demountably securing comprises applying a temporary force to said selected integrated circuits in a general direction of said module substrate.

Claim 28 (Original): The method of claim 27, wherein said step of removing said at least one integrated circuit comprises:

- removing said temporary force from said at least one integrated circuit, and
- moving said at least one integrated circuit away from said module substrate.

Claim 29 (Original): The method of claim 26, wherein said step of demountably securing comprises clipping said selected integrated circuits to said module substrate.

Claim 30 (Original): The method of claim 29, wherein said step of removing said at least one integrated circuit comprises:

unclipping said at least one integrated circuit, and
moving said at least one integrated circuit away from said module substrate.

Claim 31 (Original): The method of claim 26, wherein said step of demountably securing comprises wedging elongate interconnection elements attached to said selected integrated circuits in corresponding ones of said contact locations

Claim 32 (Original): The method of claim 31, wherein said step of removing said at least one integrated circuit comprises removing said elongate interconnection elements attached to said at least one integrated circuit from corresponding ones of said contact locations.

Claim 33 (Original): The method of claim 25, wherein said conductive elongate interconnection elements comprise spring contacts.

Claim 34 (Original): The method of claim 25, wherein said contact locations are selected from a group consisting of recesses, terminals, pads, holes, and vias.

Claim 35 (Original): The method of claim 22 further comprising:

if said module passes said testing, permanently securing to said module substrate said integrated circuits demountably secured to said module substrate.

Claim 36 (Original): The method of claim 35, wherein said step of permanently securing comprises soldering said elongate interconnection elements attached to said integrated circuits to corresponding ones of said contact locations.

Claim 37 (Original): The method of claim 35, wherein said step of permanently securing comprises applying an adhesive to adhere said integrated circuits to said module substrate.

Claim 38 (Original): The method of claim 22, wherein said assembling said electronics module comprises utilizing at least one die edge registration fixture formed on said module substrate to demountably attach said selected integrated circuits to said module substrate.

Claim 39 (Original): The method of claim 22, wherein said assembling said electronics module comprises utilizing a robotic work cell to demountably attach said elected integrated circuits to said module substrate.

Claim 40 (Original): The method of claim 22 further comprising:

if said module passes said testing:

removing said integrated circuits from said module substrate, and
permanently securing said integrated circuits to a second module substrate.

Claim 41 (Withdrawn): The method of claim 22 further comprising:

testing each said integrated circuit provided at said providing step to determine a maximum of said operating speeds at which said integrated circuit is capable of operating;

sorting said integrated circuits into groups in accordance with said operating speeds;

determining which of said groups includes sufficient integrated circuits for at least one electronics module;

selecting one of said determined groups;

wherein:

said step of assembling an electronics module comprises demountably attaching integrated circuits from said selected group to said module substrate; and

said selected one of said operating speeds is an operating speed corresponding to said selected group.

Claim 42 (Withdrawn): The method of claim 41, wherein said step of selecting one of said determined groups comprises selecting a group that corresponds to a highest operating speed of said groups determined at said step of determining which of said groups includes sufficient integrated circuits for at least one electronics module.

Claim 43 (Withdrawn): The method of claim 41, wherein each of said operating speeds is assigned a priority, and said step of selecting one of said determined groups comprises: selecting a group that corresponds to a highest of said assigned priorities among said groups determined at said step of determining which of said groups includes sufficient integrated circuits for at least one electronics module.

Claim 44 (Withdrawn): The method of claim 22, wherein:

said assembling step further comprises:

determining a maximum of said operating speeds for each of said selected integrated circuits;

identifying which of said plurality of operating speeds corresponds to a majority of said selected integrated circuits;

removing ones of said selected integrated circuits from said module board whose maximum operating speed does not correspond to said identified operating speed;

sorting said removed integrated circuits into speed groups corresponding to said plurality of operating speeds; and

replacing said removed integrated circuits;

said selected one of said operating speeds is said identified operating speed.

Claim 45 (Withdrawn): The method of claim 44 further comprising assembling a new electronics module by:

if at least one of said speed groups includes enough integrated circuits for at least one module, selecting integrated circuits from one of said at least one of said speed groups and demountably attaching said selected integrated circuits from said speed group to a module substrate;

if none of said speed groups includes sufficient integrated circuits for at least one module, repeating said assembling, determining, and identifying steps and said step of removing ones of said selected integrated circuits from said module board whose maximum operating speed does not correspond to said identified operating speed, said step of sorting said removed integrated circuits into speed groups corresponding to said plurality of operating speeds, and said step of replacing said removed integrated circuits.

Claim 46 (Withdrawn): The method of claim 45 further comprising testing said new electronics module.

Claim 47 (Previously presented): The method of claim 22 further comprising grouping said plurality of integrated circuits in accordance with said operating speeds,

wherein:

said step of assembling an electronics module comprises selecting said integrated circuits from one of said groups; and

said selected one of said operating speeds corresponding to said one of said groups.

Claim 48 (Withdrawn): The method of claim 41, wherein if said module passes said testing, rating said module to operate at said selected operating speed.

Claim 49 (Withdrawn): The method of claim 44, wherein if said module passes said testing, rating said module to operate at said selected operating speed.

Claim 50 (Withdrawn): The method of claim 22 further comprising, if said module passes said testing, repeating said testing step at a newly selected operating speed.

Claim 51 (Withdrawn): The method of claim 50, wherein said newly selected operating speed is higher than an operating speed selected during a previous execution of said testing step.

Claim 52 (Withdrawn): The method of claim 22, further comprising, if said module fails said testing, determining a number of said integrated circuits attached to said module substrate that caused said module to fail said testing.

Claim 53 (Withdrawn): The method of claim 52, wherein said steps of removing at least one of said integrated circuits, replacing said at least one removed integrated circuit, and repeating said testing are performed only if said module fails said testing and said number of integrated circuits attached to said module substrate that caused said module to fail said testing is less than a threshold number.

Claim 54 (Withdrawn): The method of claim 22 further comprising, if said module passes said testing, rating said module at said selected operating speed.

Claim 55 (Original): The method of claim 22, further comprising, if said module fails said testing, determining a number of times said module has failed said testing at said selected operating speed.

Claim 56 (Original): The method of claim 55, wherein said steps of removing at least one of said integrated circuits, replacing said at least one removed integrated circuit, and repeating said testing are performed only if said module fails said testing and said number of times said module has failed said testing at said selected operating speed is less than a threshold number.

Claim 57 (Original): The method of claim 56 further comprising repeating said testing step at a newly selected operating speed that is less than an operating speed selected during a previous execution of said testing step.